CLAIMS:

1. A method of controlling temperature at an auxiliary power unit located in a vehicle comprising:

sensing a reformer zone temperature at a reformer zone;

determining whether said reformer zone temperature is at a first selected temperature range; and

adding a process air flow to said reformer zone if said reformer zone temperature rises above said first selected temperature range.

2. The method in Claim 1, further comprising reducing said process air flow to said reformer zone if said reformer zone temperature falls below said first selected temperature range.

3. The method in Claim 1, further comprising increasing said process air flow to said reformer zone if said reformer zone temperature increases above said first selected temperature range.

4. The method in Claim 1,wherein said adding said process air flow comprises controlling said process air flow via an air control valve.

5. The method in Claim 1, wherein said first selected temperature range is about 300° C to about 500° C.

6. The method in Claim 1, further comprising:

sensing a hot zone temperature at a hot zone;

determining whether said hot zone temperature is at a second selected temperature range; and

adding a second process air flow to said hot zone if said hot zone temperature rises above said second selected temperature range.

7. The method in Claim 6, further comprising reducing said second process air flow to said hot zone if said hot zone temperature falls below said second selected temperature range.

8. The method in Claim 6, further comprising increasing said second process air flow to said hot zone if said hot zone temperature increases above said second selected temperature range.

9. The method in Claim 6, wherein adding said second process air flow comprises controlling said second process air flow via a second air control valve.

10. The method in Claim 6, further comprising moving a reformer air from said reformer zone to said hot zone.

11. The method in Claim 6, further comprising moving a hot air to a waste energy recovery unit.

12. The method in Claim 6, wherein said second selected temperature range is about 600° C to about 800° C.

13. The method in Claim 6, wherein said second selected temperature range is about 725° C to about 775° C.

14. A method of controlling temperature at an auxiliary power unit located in a vehicle comprising:

sensing a reformer zone temperature at a reformer zone;

determining whether said reformer zone temperature is at a first selected temperature range;

adding a process air flow to said reformer zone if said reformer zone temperature rises above about said first selected temperature range;

sensing a hot zone temperature at a hot zone;

determining whether said hot zone temperature is in a second selected temperature range; and

adding a second process air flow to said hot zone if said hot zone temperature rises above said second selected temperature range.

15. The method in Claim 14, further comprising reducing said process air flow to said reformer zone if said reformer zone temperature falls below said first selected temperature range.

16. The method in Claim 14, further comprising increasing said process air flow to said reformer zone if said reformer zone temperature increases above said first selected temperature range.

17. The method in Claim 14, further comprising reducing said second process air flow to said hot zone if said hot zone temperature falls below said second selected temperature range.

18. The method in Claim 14, further comprising increasing said second process air flow to said hot zone if said hot zone temperature increases above said second selected temperature range.

19. The method in Claim 14, wherein said adding said process air flow comprises controlling said process air flow via a first air control valve.

20. The method in Claim 14, wherein adding said second process air flow comprises controlling said second process flow air via a second air control valve.

21. The method in Claim 14, further comprising moving a reformer air from said reformer zone to said hot zone.

22. The method in Claim 14, further comprising moving a hot air to a waste energy recovery unit.

23. The method in Claim 14, wherein said first selected temperature range is about 300° C to about 500° C.

24. The method in Claim 14, wherein said second selected temperature range is about 600° C to about 800° C.

25. The method in Claim 14, wherein said second selected temperature range is about 725° C to about 775° C.

26. A method of producing electricity at an auxiliary power unit in a vehicle comprising:

adding a fuel and a reactant to a fuel reformer;

producing a reformate at said fuel reformer;

introducing said reformate to a fuel cell stack;

producing electrical power at said fuel cell stack;

sensing a reformer zone temperature at a reformer zone;

determining whether said reformer zone temperature is at a first selected temperature range; and

adding a first process air flow to said reformer zone if said reformer zone temperature rises above said first selected temperature range.

27. The method in Claim 26, further comprising reducing said first process air flow to said reformer zone if said reformer zone temperature falls below said first selected temperature range.

28. The method in Claim 26, further comprising increasing said first process air flow to said reformer zone if said reformer zone temperature increases above said first selected temperature range.

29. The method in Claim 26, wherein said adding said first process air flow comprises controlling said first process air flow via a first air control valve.

30. The method in Claim 26, wherein said first selected temperature range is about 300° C to about 500° C.

31. The method in Claim 26, further comprising:

sensing a hot zone temperature at a hot zone;

determining whether said hot zone temperature is at a second selected temperature range; and

adding a second process air flow to said hot zone if said hot zone temperature rises above said second selected temperature range.

32. The method in Claim 31, further comprising reducing said second process air flow to said hot zone if said hot zone temperature falls below said second selected temperature range.

33. The method in Claim 31, further comprising increasing said second process air flow to said hot zone if said hot zone temperature increases above said second selected temperature range.

34. The method in Claim 31, wherein adding said second process air flow comprises controlling said second process air flow via a second air control valve.

35. The method in Claim 31, further comprises moving a reformer air to said hot zone.

36. The method in Claim 31, further comprises moving a hot air to a waste energy recovery unit.

37. The method in Claim 31, wherein said second selected temperature range is about 600° C to about 800° C.

38. The method in Claim 31, wherein said second selected temperature range is about 725° C to about 775° C.

39. A thermal management system for use with an auxiliary power unit comprising:

a first air control valve in fluid communication with a first process air supply and a fuel reformer zone, said first air control valve in operable communication with a controller;

a second air control valve in fluid communication with a second process air supply and a hot zone, said second air control valve in operable communication with said controller;

a reformer zone temperature sensor in thermal communication with said reformer zone and in operable communication with said controller;

a hot zone temperature sensor in thermal communication with said hot zone and in operable communication with said controller;

a first outlet at said reformer zone; and

a second outlet at said hot zone.

40. The thermal management system in Claim 39, wherein said second outlet is in fluid communication with a waste energy recovery unit.

41. The thermal management system in Claim 39, wherein said first outlet is in fluid communication with said hot zone.

42. A thermal management system for use with an auxiliary power unit comprising:

means for sensing a reformer zone temperature at a reformer zone;

means for determining whether said reformer temperature is at a selected temperature range; and

means for adding a process air to said reformer zone if said reformer zone temperature rises above said selected temperature range.

43. A method for fuel cell system thermal management, comprising:

maintaining a first zone at a first selected temperature range;

maintaining a second zone at a second selected temperature range, wherein said second zone is in thermal communication with a first sensor and comprises a reformer and wherein said second selected temperature range is greater than said first selected temperature range; and

maintaining a third zone at a third selected temperature range, wherein said third zone is in thermal communication with a second sensor and comprises a fuel cell stack and wherein said third selected temperature range is greater than said second selected temperature range.

44. The thermal management system in Claim 43, wherein said third zone further comprises a waste energy recovery unit.

45. The thermal management system in Claim 43, wherein said first zone is in fluid communication with said second zone and said second zone is in fluid communication with said third zone.

46. The thermal management system in Claim 43, further comprising a controller in operable communication with said first sensor and said second sensor.